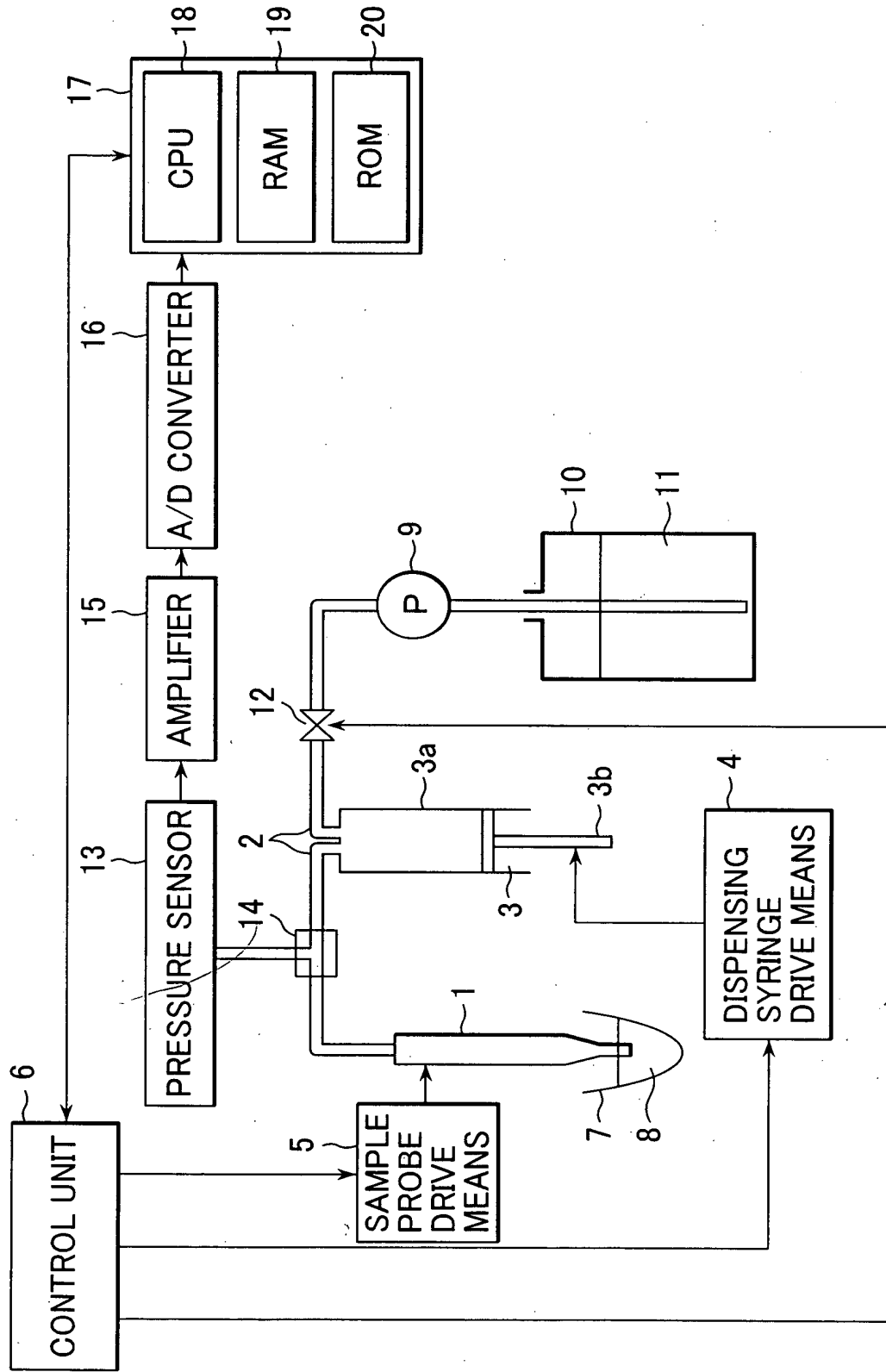


FIG.1



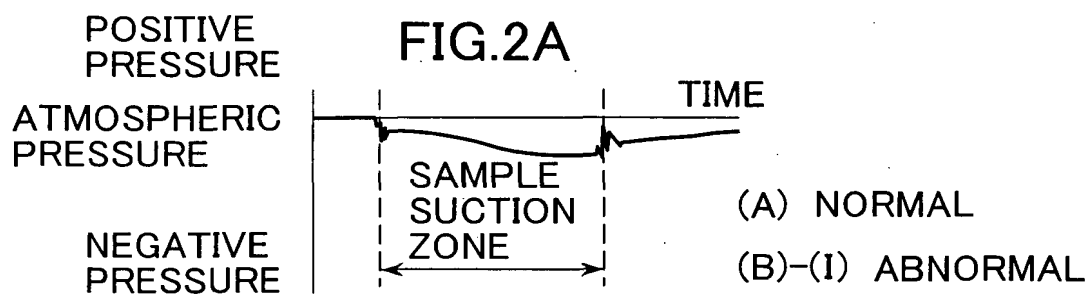


FIG. 2B

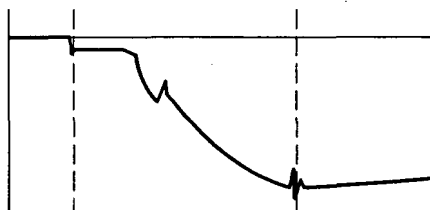


FIG. 2C

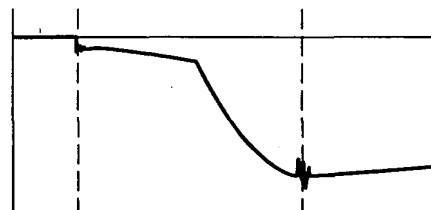


FIG. 2D

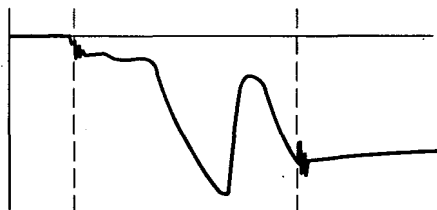


FIG. 2E

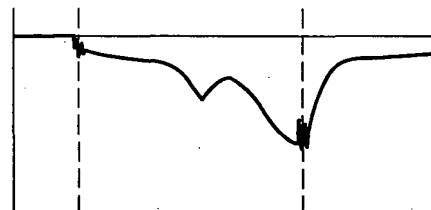


FIG. 2F

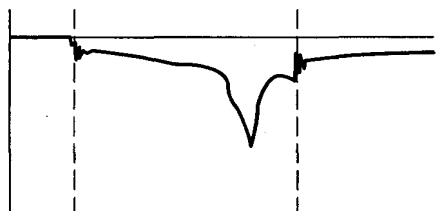


FIG. 2G

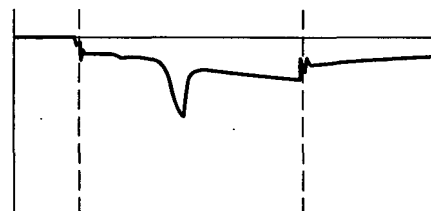


FIG. 2H

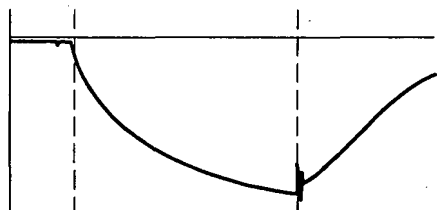


FIG. 2I

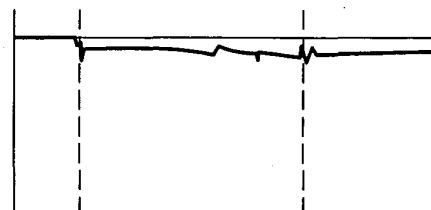


FIG.3

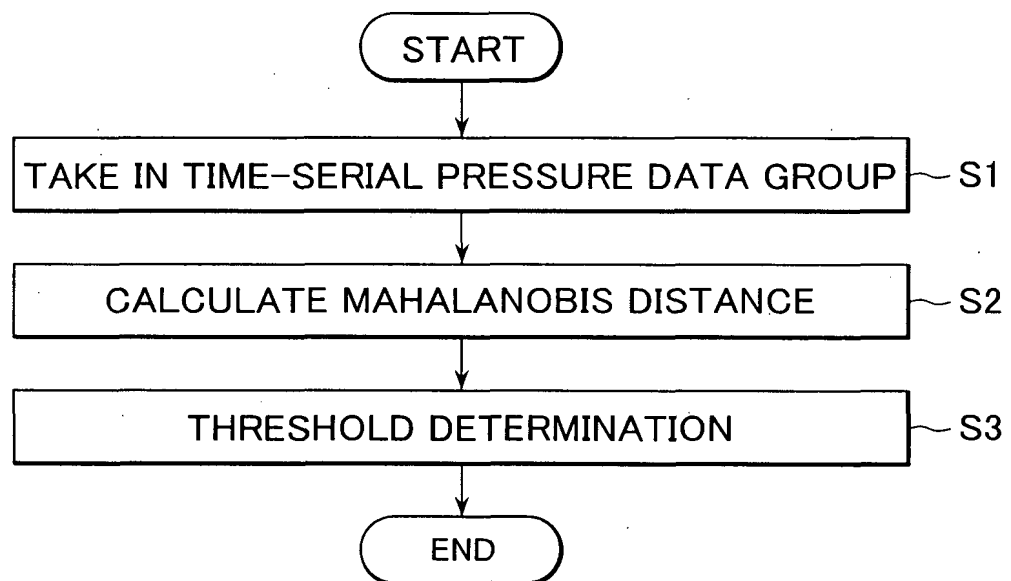


FIG.4

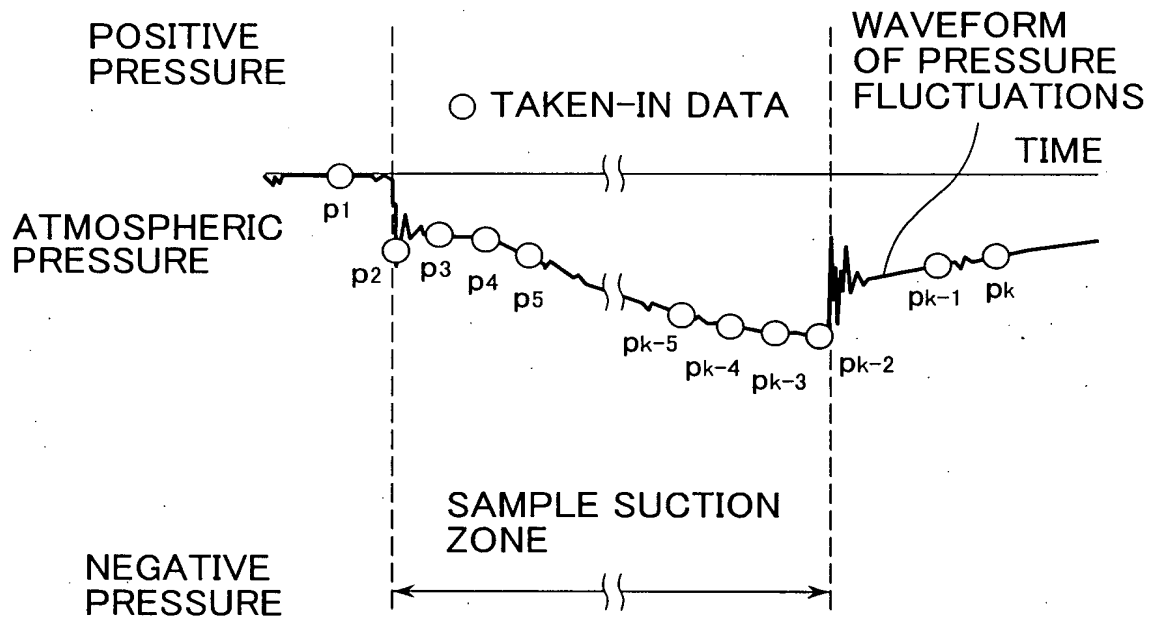


FIG.5

ITEM NO.	1	2	...	$k-1$	k
PRESSURE VALUE	p_1	p_2	...	p_{k-1}	p_k

FIG.6

ITEM NO EVENT NO	1	2	...	k-1	k
1	p11	p12	...	p1k-1	p1k
2	p21	p22	...	p2k-1	p2k
⋮
n-1	p _{n-1} 1	p _{n-1} 2	...	p _{n-1} k-1	p _{n-1} k
n	p _n 1	p _n 2	...	p _n k-1	p _n k

FIG.7

PRESSURE WAVEFORM	MAHALANOBIS DISTANCE D_2
(a) NORMAL	1
(b)	1,185
(c)	2,442
(d)	4,176
(e)	814
(f)	1,225
(g)	179
(h)	603
(i)	36

FIG.8

AVERAGE OF D ₂ IN NORMAL DISPENSING (n=288)	1.00
STANDARD DEVIATION OF D ₂ IN NORMAL DISPENSING (n=288)	0.56

FIG.9A

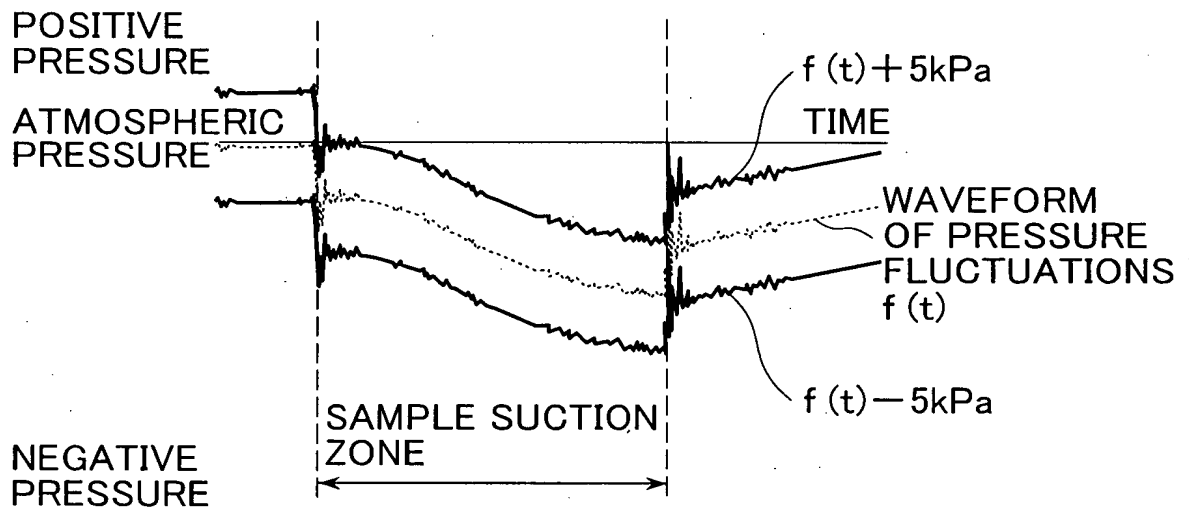


FIG.9B

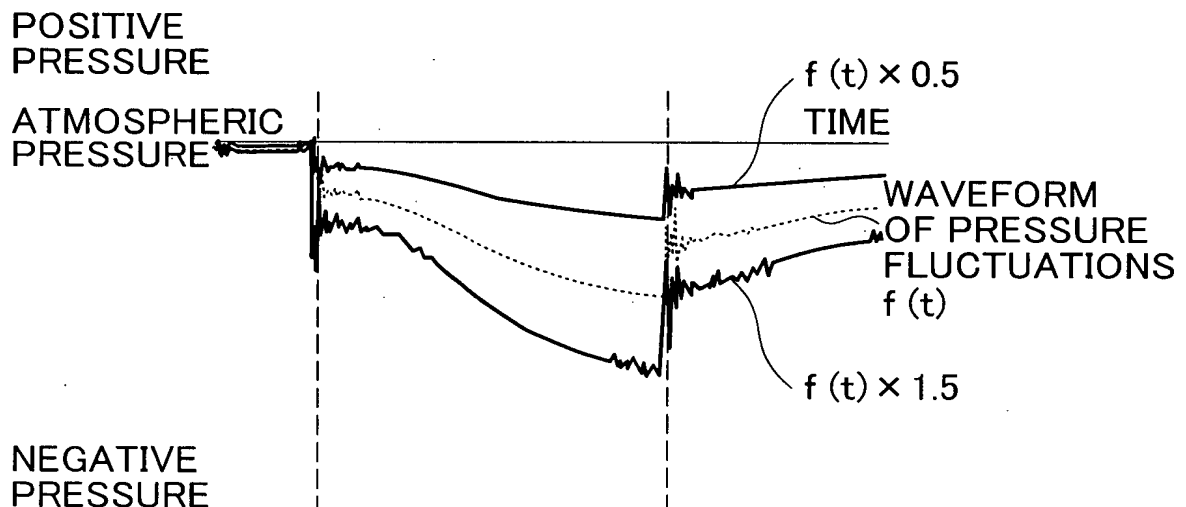


FIG.10

PRESSURE WAVEFORM	-5kPa	+5kPa	× 0.5	× 1.5
(a) NORMAL	7	6	7	6
(b)	1,158	1,225	227	2,902
(c)	2,510	2,387	551	5,699
(d)	4,141	4,224	1,031	9,463
(e)	856	785	204	1,858
(f)	1,183	1,280	286	2,844
(g)	187	184	56	397
(h)	614	604	164	1,343
(i)	53	32	24	64

FIG.11

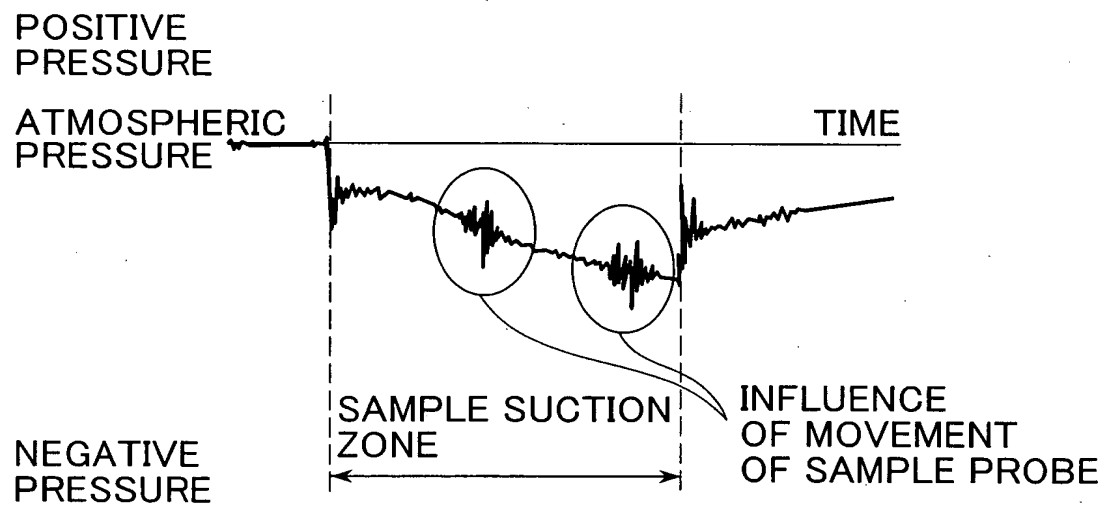


FIG.12

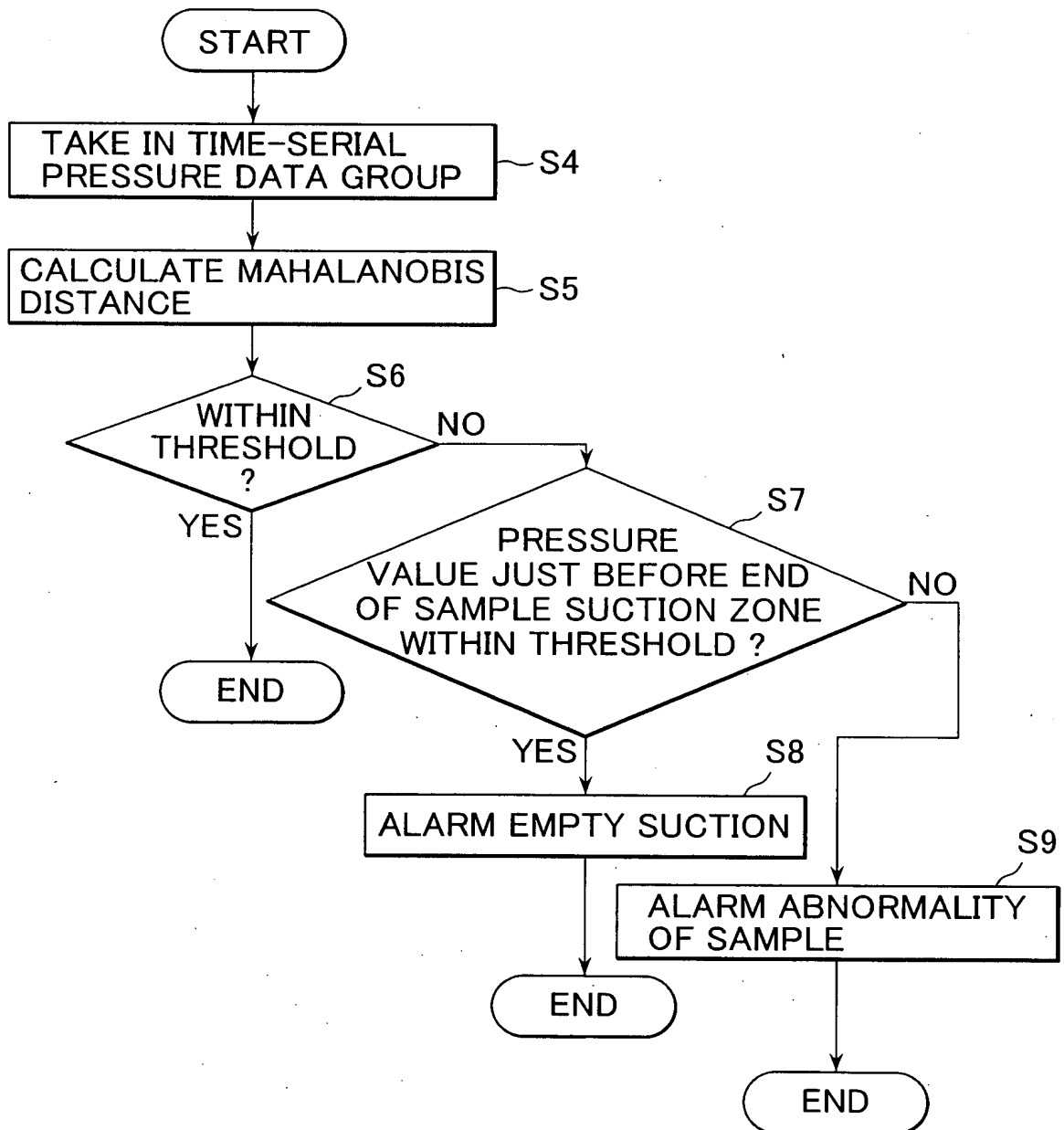


FIG.13

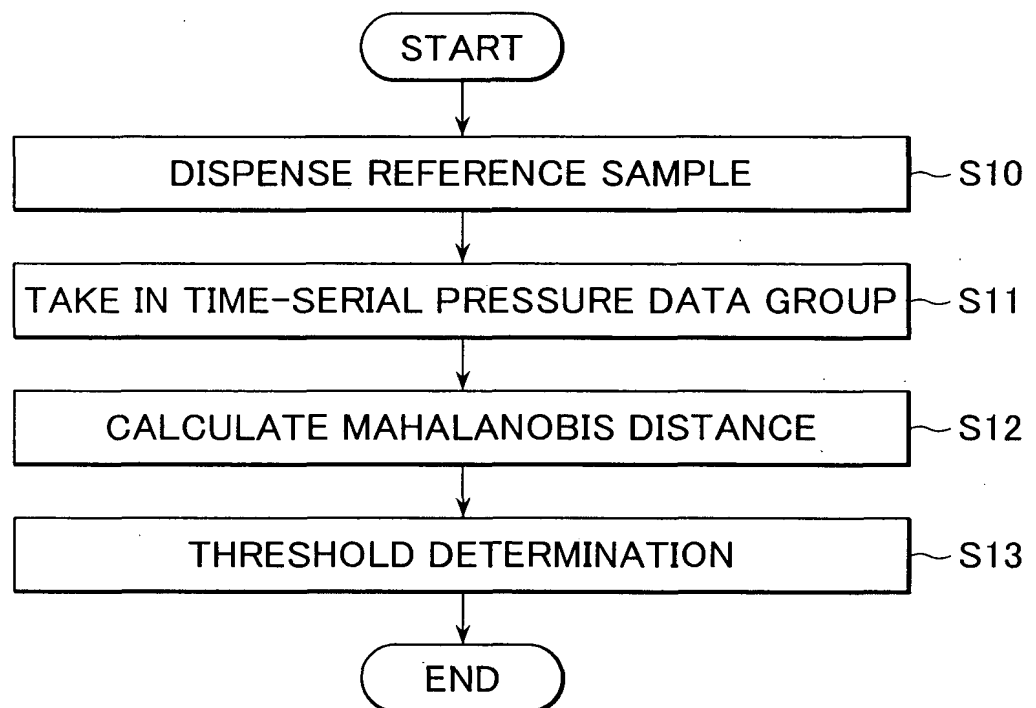


FIG.14

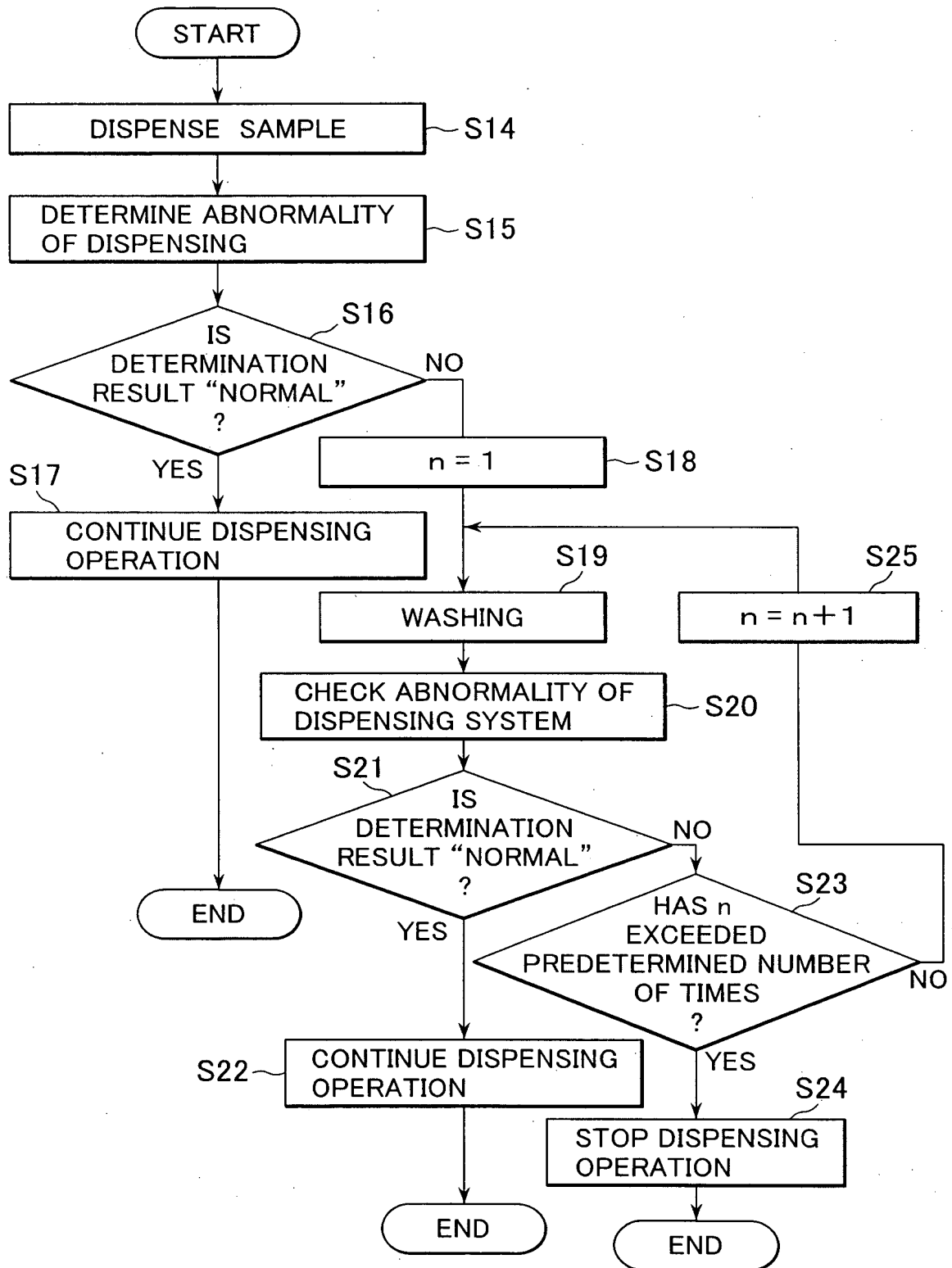


FIG.15

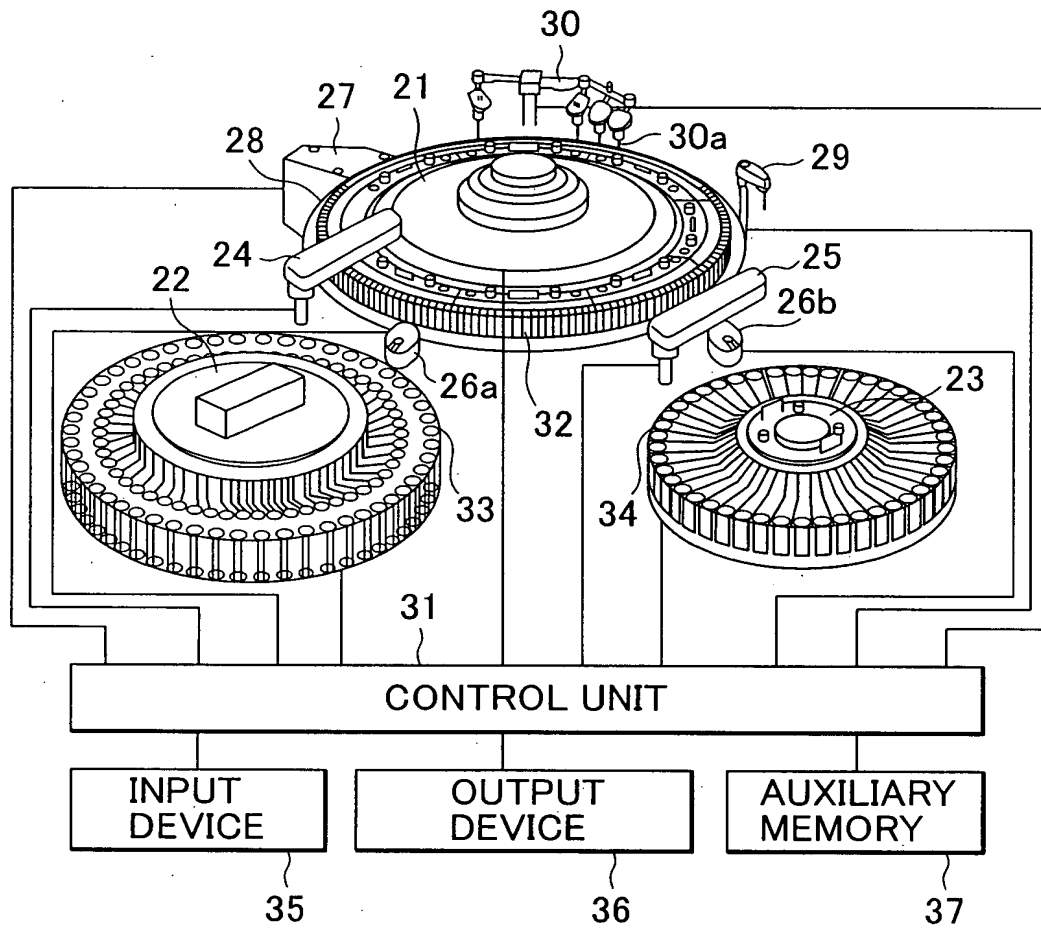


FIG.16

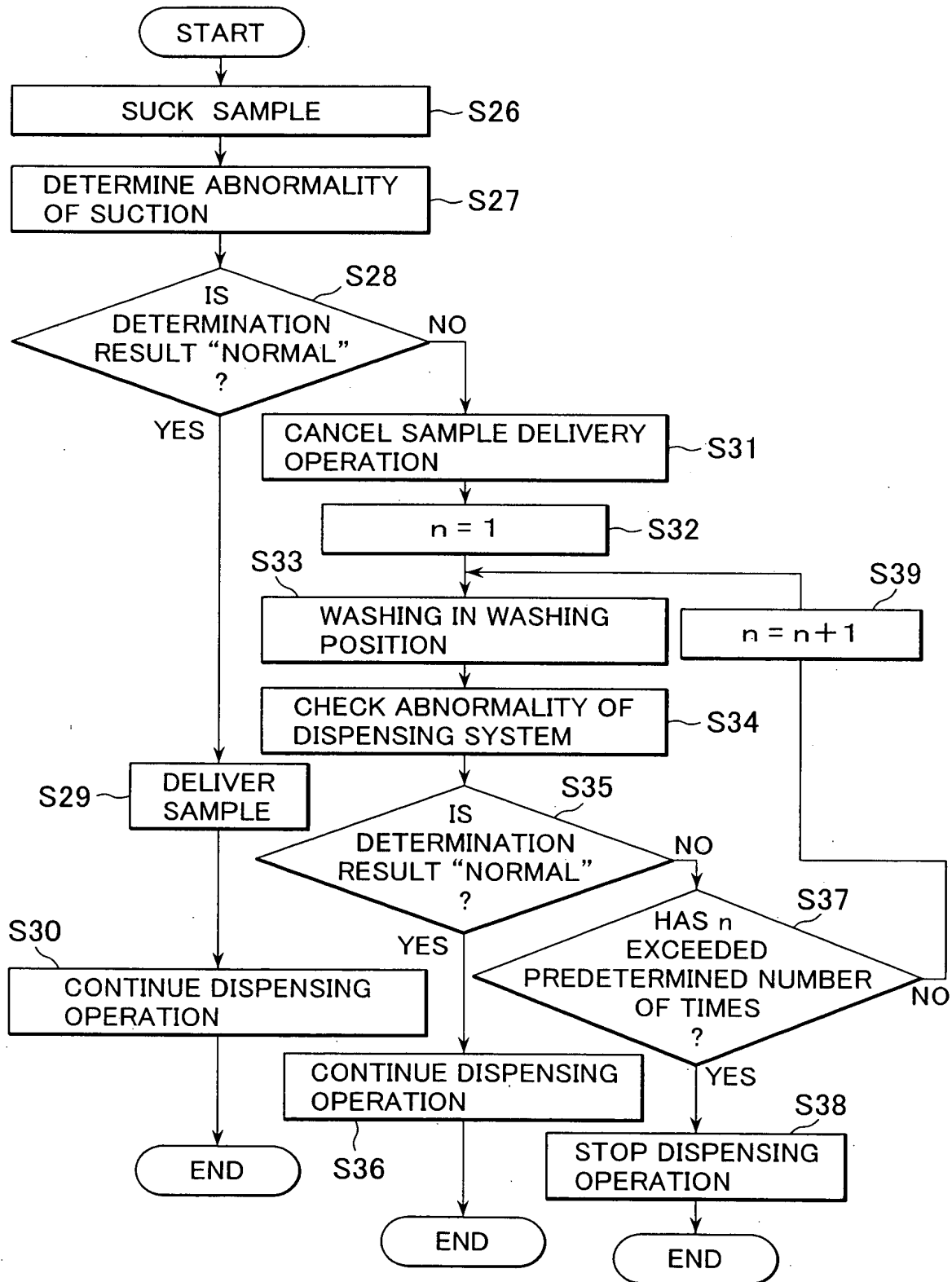


FIG.17

